Amendments to the Claims

1-9. (Canceled)

10. (Currently Amended) A nanoparticle having a plurality of polyanionic polymer conjugates [of claim 1] attached thereto, said polyanionic polymer conjugates having the formula L-O-[PO_2-O-Z-O]$_n$-PO_2-O-X
wherein n ranges from 1 to 200; L represents a moiety comprising a functional group for attaching the polyanion polymer to a nanoparticle surface; Z represents a bridging group, and X represents Q, X' or -Q-X', wherein Q represents a functional group comprising a carboxylic acid or an amino group for attaching a recognition probe to the polyanion polymer, and X' represents a recognition probe.

11. (Original) The nanoparticle of claim 10, wherein the polyanionic polymer conjugate further comprises a detection label bound thereto.

12. (Original) The nanoparticle of claim 11, wherein the detection label comprises a chromophore, a fluorescent label, a UV label, a radioisotope, a Raman label or a SERS (surface enhanced raman spectroscopy) label, or an enzyme.

13. (Canceled)

14. (Original) The nanoparticle of claim 10, wherein the recognition probe comprises a protein, a peptide, a nucleic acid, a peptide nucleic acid, a linked nucleic acid, a nucleoside triphosphate, a carbohydrate, a lipid, a lipid bound protein, an aptamer, a virus, a cell fragment, or a whole cell.

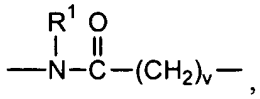
15. (Withdrawn) The nanoparticle of claim 14, wherein the lipid bound protein comprises a G-protein coupled receptor.

16. (Withdrawn) The nanoparticle of claim 10, wherein the recognition probe comprises an antibody, an antigen, a receptor, or a ligand.

17. (Original) The nanoparticle of claim 10 wherein L comprises an alkanethiol

containing group, a phosphorothioate containing group, a substituted alkylsiloxane containing, a polythiol containing group, or a cyclic disulfide containing group.

18. (Original) The nanoparticle of claim 10 wherein Z comprises a polymer, -C_1-C_{10}-alkyl-, -COO-, -$CH_2(CH_2)_vCOO$-, -OCO-, $R^1N(CH_2)_v$-NR^1-, -$OC(CH_2)_v$-, -$(CH_2)_v$-, -O-$(CH_2)_v$-O-, -R^1N-$(CH_2)_v$-,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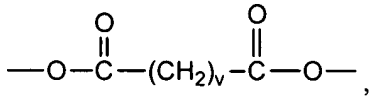
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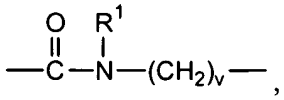
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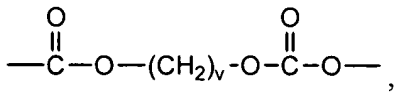
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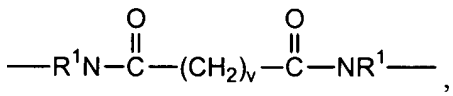
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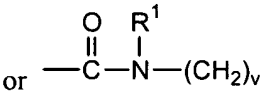
or 
, v is 0-30 and R^1 is H or is $G(CH_2)_v$, wherein G is $-CH_3$, -$CHCH_3$, -COOH, -$CO_2(CH_2)_vCH_3$, -OH, or -CH_2OH.

19-42. (Canceled)

43. (Currently Amended) A kit for detecting the presence or absence of a target analyte in a sample comprising:

(a) nanoparticles having polyanionic polymer conjugates bound thereto, wherein the polyanion polymers have the formula:

$$L\text{-}O\text{-}[\,PO_2\text{-}O\text{-}Z\text{-}O]_n\text{-}PO_2\text{-}O\text{-}X$$

wherein n ranges from 1 to 200; L represents a moiety comprising a functional group for attaching the polyanion polymer to a nanoparticle surface; Z represents a bridging group, and X represents Q, X' or -Q-X', wherein Q represents a functional group comprising a carboxylic acid or an amino group for attaching a recognition probe to the polyanion polymer, and X' represents a recognition probe; and

(b) an optional substrate for observing a detectable change.

44. (Original) The kit of claim 43, wherein the polyanionic polymer conjugate further comprises a detection label bound thereto.

45. (Original) The kit of claim 44, wherein the detection label comprises a chromophore, a fluorescent label, a UV label, a radioisotope, a Raman label or a SERS (surface enhanced raman spectroscopy) label, or an enzyme.

46. (Canceled)

47. (Original) The kit of claim 43, wherein the probe comprises a protein, a peptide, a nucleic acid, a peptide nucleic acid, a linked nucleic acid, a nucleoside triphosphate, a carbohydrate, a lipid, a lipid bound protein, an aptamer, a virus, a cell fragment, or a whole cell.

48. (Withdrawn) The kit of claim 47, wherein the lipid bound protein comprises a G-protein coupled receptor.

49. (Withdrawn) The kit of claim 43, wherein the probe comprises an antibody, an antigen, a receptor, or a ligand.

50. (Original) The kit of claim 43 wherein the substrate is a transparent substrate or an opaque white substrate.